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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,670

11/07/2005

Yujin Zheng

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EXAMINER

JONES, JAMES

ART UNIT

PAPER NUMBER

2873

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/525,670

Applicant(s)

ZHENG ET AL.

Examiner

James C. Jones

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2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/07/2005 and 6/20/2007</u>                                  | 6) <input type="checkbox"/> Other: ____                           |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

The abstract of the disclosure of 11/07/2005 is objected to because the abstract must be no longer than 150 words and no more than 15 lines in length, in the instant case the abstract is longer than the 15-line limit. Correction is required. See MPEP § 608.01(b).

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 11/07/2007 and 6/20/2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claim 5** (and its dependents) are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "a second optical combiner having one or more transmitting portions for receiving and transmitting the beams combined by the first optical combiner and one or more reflecting portions for receiving and reflecting the beams emitted from the third beam converter to combine the beams transmitted through the one or more transmitting portions and the beams reflected by the one or

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more reflecting portions”(the assumed meaning), does not reasonably provide enablement for “a second optical combiner having one or more transmitting portions for receiving and transmitting the beams emitted from the third beam converter and one or more reflecting portions for receiving and reflecting the beams combined by the first optical combiner to combine the beams transmitted through the one or more transmitting portions and the beams reflected by the one or more reflecting portions”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Specifically, the specification and embodiments, such as the figure 13 embodiment, depicts the second optical combiner receiving and transmitting the combine light coming from the first optical combiner “30” not reflecting the light. Also the figure 13 embodiment, depicts the beams received by the second optical combiner from third beam converter are reflected by the second optical combiner not transmitted. Therefore claiming that a second optical combiner having one or more transmitting portions for receiving and transmitting the beams emitted from the third beam converter and one or more reflecting portions for receiving and reflecting the beams combined by the first optical combiner to combine the beams transmitted through the one or more transmitting portions and the beams reflected by the one or more reflecting portions creates a lack of enablement.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiiri (5048030) hereafter '030.

'030 discloses the limitations therein including the following:

Regarding **claim 1** '030 discloses An optical condenser device comprising: a first light source having a first semiconductor laser array with a plurality of active layers aligned in parallel in a first direction(fig. 1 and 2,col.8,ln.24-29 "10A" as the first semiconductor laser"), a first collimator lens for collimating a plurality of beams emitted from the plurality of active layers in a plane perpendicular to the first direction(fig. 1 and 2,col.8,ln.29-31 "12A" as the "first collimator lens"), and a first beam converter for receiving the beams collimated by the first collimator lens to rotate the transverse section of each beam by substantially 90.degree(fig. 1 and 2,col.8,ln.31-39 the half wave plate "14A" as the "first beam converter"); a second light source having a second semiconductor laser array with a plurality of active layers aligned in parallel in a second direction(fig. 1 and 2,col.8,ln.67-68 and col.9,ln.1-5 "10B" as the second semiconductor laser"), a second collimator lens for collimating a plurality of beams emitted from the plurality of active layers in a plane perpendicular to the second direction(fig. 1 and 2,col.9,ln.8-10 "12B" as the "second collimator lens"), and a second beam converter for receiving the beams collimated by the second collimator lens to rotate the transverse section of each beam by substantially 90.degree(fig. 1 and 2,col.9,ln.10-18 the half wave plate "14B" as the "second beam converter"); and a first optical combiner for combining

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the beams from the first light source with the beams from the second light source, the first optical combiner having one or more transmitting portions for receiving and transmitting the beams emitted from the first beam converter and one or more reflecting portions for receiving and reflecting the beams emitted from the second beam converter to combine the beams transmitted through the one or more transmitting portions with the beams reflected by the one or more reflecting portions (fig. 1 and 2 the polarized beam splitter "16" as the "first optical combiner").

With respect to the claimed "laser array being stacked" the Examiner takes Judicial notice that it is well known in the art of optical devices that use an optical combiner to condense laser beams to have a plurality of "stacked" semiconductor laser arrays for the purpose of making the condensed output beam brighter. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a multiple semiconductor laser e.g. "10A" stacked as claimed since it is well known in the art of optical devices that use an optical combiner to condense laser beams to have a plurality of "stacked" semiconductor laser arrays for the purpose of making the condensed output beam brighter.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anikitchev et al. (20040252743) hereafter '743

'743 discloses the limitations therein including the following:

Regarding claim 1 '743 discloses an optical condenser device comprising: a first light source (fig. 7 or fig. 9, par. [0057], "22A" as the "first light source"); a second

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light source (fig. 7 or fig. 9, par. [0057], "22B" as the "second light source"); and a first optical combiner for combining beams from the first light source with beams from the second light source (abstract, fig. 7 or fig. 9, par. [0005] and [0057] "132" as the "optical combiner"), the first light source having a first semiconductor laser array stack in which a plurality of semiconductor laser arrays, each having a plurality of active layers aligned in parallel in a first direction, are stacked in a direction perpendicular to the first direction (fig. 7 or fig. 9, par. [0057], "22B" as the "first semiconductor laser"), a first collimator lens for collimating a plurality of beams in a plane perpendicular to the first direction (fig. 7 or fig. 9, par. [0048] "34" as the "collimator lens"), the second light source having a second semiconductor laser array stack in which a plurality of semiconductor laser arrays, each having a plurality of active layers aligned in parallel in a second direction, are stacked in a direction perpendicular to the second direction (fig. 7 or fig. 9, par. [0057], "22B" as the "second semiconductor laser"), a second collimator lens for collimating a plurality of beams in a plane perpendicular to the second direction (fig. 7 or fig. 9, par. [0048] "34" as the "collimator lens"), and the first optical combiner having one or more transmitting portions for receiving and transmitting the beams emitted from the first beam converter and one or more reflecting portions for receiving and reflecting the beams emitted from the second beam converter to combine the beams transmitted through the transmitting portions with the beams reflected by the reflecting portions (abstract, fig. 7 or fig. 9, par. [0005] and [0057] "132" as the "optical combiner").

'743 discloses as is set forth above except for the beam converter (fig. 9 half wave plate "58A") for receiving the beams collimated by the collimator lens to rotate the

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transverse section of each beam by substantially 90 degrees to be placed before the optical combiner. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the beam converter (half wave plate '58A") before the optical combiner for the benefit of rotating the beam 90 degrees (fig.7 or 9,col. [0028] and [0058] the half wave plate "58A" as the "beam converter" Note: that reference numbers 58 and 58A both refer to the half wave plate par [0028] describes the operation of the half wave plate in greater detail then [0058]), since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Regarding claim 2 '743 discloses the optical condenser device according to claim 1, wherein the transmitting portions and the reflecting portions of the first optical combiner both have strip-like shapes elongated in the direction of stacking of the laser arrays, and the first optical combiner is a flat plate having the transmitting portions and the reflecting portions positioned alternately (fig.7, par. [0005] and [0048]-[0051] "132" as the "optical combiner" Note: that reference number 132 refers to the beam combiner and fig.7 depicts the operation of the optical combiner in greater detail) .

Regarding claim 3 '743 discloses the optical condenser device according to claim 2, wherein the first optical combiner is inclined at an angle of 45.degree. with respect to the central axes of both the beams emitted from the active layers of the first light source and the beams emitted from the active layers of the second light source, the



front surface of the first optical combiner opposes the first light source, and the back surface of the first optical combiner opposes the second light source (fig. 7 or fig. 9).

***Allowable Subject Matter***

**Claims 4, 6-7** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable claims, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, in reference to **claim 4**, none of the prior art either alone or in combination disclose or teach of the claimed optical condenser device specifically including, as the distinguishing features in combination with the other limitations, the claimed "second optical combiner having one or more transmitting portions for receiving and transmitting the beams combined by the first optical combiner and one or more reflecting portions for receiving and reflecting the beams emitted from the third beam converter to combine the beams transmitted through the one or more transmitting portions and the beams reflected by the one or more reflecting portions".

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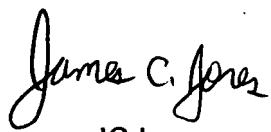
**Conclusion**

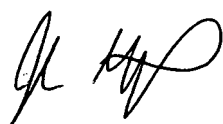
Anikichev et al. (20040067016), Kaneda et al. (5212710), and Schreiber et al. (6680800) are being cited herein to show a reference(s) that disclose some similar features to that of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James C. Jones whose telephone number is (571) 270-1278. The examiner can normally be reached on Monday thru Friday, 8 a.m. to 5 p.m. est. time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 8/15/2007  
JCJ

  
JORDAN SCHWARTZ  
PRIMARY EXAMINER